Patent Claims

1. Method for increasing the yield of recombinant proteins in microbial fermentation processes, **characterized by** the fact that the concentration of the carbon / energy source in the culture is oscillatingly reduced or increased in short cycles.

2. Method according to Claim 1, characterized by the fact that the oscillations are generated by changing the dosage rate of the feed solution containing the carbon/energy source.

3. Method according to Claims 1 and 2, characterized by the fact that the maximum duration of one cycle is 4 minutes, and the duration of a single phase of the cycle is a maximum of two minutes.

4. Method according to any of Claims 1 through 3, characterized by the fact that the duration of one cycle is one minute, and the duration of a phase of the cycle is a maximum of 75% of the total cycle time.

5. Method according to any of Claims 1 through 3, characterized by the fact that the carbon/energy source is added to the culture in such a manner as to cyclically vary the rate of addition of the substrate solution only during certain segments of the process.

6. Method according to any of Claims 1 through 5, characterized by the fact that the dosage rate is controlled by cyclical activation and deactivation of the addition of the feed solution.

7. Method pursuant to any of Claims 1 through 5, characterized by the fact that glucose, glycerol, lactose, galactose, methanol, acetate, molasses, or starch is used as the carbon/energy substrate.

8. Method pursuant to any of Claims 1 through 7, characterized by the fact that, depending on the promoter used, IPTG or indolyl acrylic acid (IAA), or lactose, arabinose, galactose, or methanol (if not already used as the energy

source) are added to the culture to induce formation of the recombinant product.

9. Method pursuant to any of Claims 1 through 9, characterized by the fact that a temperature shift occurs at the time of the induction of the formation of the recombinant product.